

Title (en)  
HOST-CONVERTIBLE SECURE ENCLAVES IN MEMORY THAT LEVERAGE MULTI-KEY TOTAL MEMORY ENCRYPTION WITH INTEGRITY

Title (de)  
HOST-UMWANDELBARE SICHERE ENKLAVEN IN SPEICHER, DIE MEHRSCHLÜSSEL-GESAMTSPEICHERVERSCHLÜSSELUNG MIT INTEGRITÄT NUTZT

Title (fr)  
ENCLAVES SÉCURISÉES CONVERTIBLES HÔTES DANS UNE MÉMOIRE EXPLOITANT UN CHIFFREMENT DE MÉMOIRE TOTALE MULTI-CLÉS AVEC INTÉGRITÉ

Publication  
**EP 3757859 B1 20220928 (EN)**

Application  
**EP 20162644 A 20200312**

Priority  
US 201916454481 A 20190627

Abstract (en)  
[origin: EP3757859A2] A processor includes a cryptographic engine to control access, using an secure region key identifier (ID), to one or more memory range of memory allocable for flexible conversion to secure pages of architecturally-protected memory regions, and a processor core. The processor core is to, responsive to receipt of a request to access the memory, perform a walk of page tables and extended page tables to translate a linear address of the request to a physical address of the memory. The processor core is further to determine that the physical address corresponds to an secure page within the one or more memory range of the memory, that a first key ID located within the physical address does not match the secure region key ID, and issue a page fault and deny access to the secure page in the memory.

IPC 8 full level  
**G06F 21/79** (2013.01); **G06F 12/0804** (2016.01); **G06F 12/0882** (2016.01); **G06F 12/1036** (2016.01); **G06F 12/14** (2006.01)

CPC (source: CN EP US)  
**G06F 9/4406** (2013.01 - US); **G06F 11/0772** (2013.01 - US); **G06F 11/3037** (2013.01 - US); **G06F 12/0804** (2013.01 - EP); **G06F 12/0871** (2013.01 - US); **G06F 12/0882** (2013.01 - EP US); **G06F 12/0891** (2013.01 - US); **G06F 12/1036** (2013.01 - EP); **G06F 12/1063** (2013.01 - US); **G06F 12/1408** (2013.01 - EP US); **G06F 12/1441** (2013.01 - EP); **G06F 12/1466** (2013.01 - EP); **G06F 21/602** (2013.01 - CN); **G06F 21/78** (2013.01 - CN); **G06F 21/79** (2013.01 - EP); **G06F 2212/1052** (2013.01 - EP); **G06F 2212/151** (2013.01 - EP); **G06F 2212/657** (2013.01 - EP)

Cited by  
US11914524B2; WO2023168140A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**EP 3757859 A2 20201230**; **EP 3757859 A3 20210113**; **EP 3757859 B1 20220928**; CN 112149153 A 20201229; US 11030120 B2 20210608; US 2021064546 A1 20210304

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**EP 20162644 A 20200312**; CN 202010231620 A 20200327; US 201916454481 A 20190627